

ZAPROMTOV, M.N.

FA 247721

USSR/Medicine - Vitamins
Catechins
Nov/Dec 52

"The Vitamin Activity of Catechins of Tea Leaves,"
A. L. Kursanov, M. N. Zapromtov, N. N. Erofyeva,
Inst of Biochemistry im A. N. Bakh, Acad Sci USSR,
Moscow

Biokhimiya, Vol 17, No 6, pp 729-733

Describes research on the vitamin activity of tea leaves. Expts on rats showed the presence of a high content of vitamin P in all four major catechins of the tissues of mature leaves in tea.

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plants. The authors state that some catechins isolated from tea leaves are effective in strengthening the capillary walls while others are active in suppressing hyperthyroid manifestations. They advocate the utilization of ripe tea leaves for the extn of tannin having a vitamin P activity. The constitution of the physiologically active catechins is given.

247721

1. ZAPROMSTOV, M. N.
2. USSR (600)
4. Tannins
7. Chromatography of tea tannin. Priroda 41 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

ZAPROMETOV, M. N.

A. ✓-4X
10/1954

Comparative study of the composition of tea tannin by chromatography. M. N. Zaprometov (A. N. Bakul Biochem. Inst., Moscow). Doklady Akad. Nauk. S.S.R. 87, 649-52 (1952).—The tea tannins (for isolation cf. C.A. 46, 11166g) were ground with Et₂O and the ext. passed through a silica gel column, which gave good sepn. of *dl*-gallocatechin and *l*-epigallocatechin from the main catechin group. Analysis as described earlier (cf. loc. cit.) for *L*-epicatechin, *ll*-catechin, *l*-epigallocatechin, *dl*-gallocatechin, *l*-epicatechin gallate, *l*-epigallocatechin gallate, and *l*-gallocatechin gallate showed that catechins in the 2-leaf specimens are 1.6 times more concd. than in 5-6 leaf specimens. Generally with aging of tea leaves the tannin content declines in respect to simple catechins with α -HO groups, while *l*-epigallocatechin and *dl*-gallocatechin levels rise. Since the tannins have higher oxidation-reduction potential, the fermentation of young tea leaves can cause more intense oxidative processes. Treatment of catechins with polyphenoloxidase indicates that tea tannin is a complex system whose quant. compn. is responsible for the course of oxidative processes. The ratio of simple ortho-catechins to simple gallocatechins appears to be most significant in this connection; the greater this ratio the more rapid and deep-seated is the oxidation of tea tannin. In 2-leaf specimens the ratio is 0.18, while in 5-6 leaf specimens it is 0.1. Thus the older leaves are less susceptible to secondary oxidative processes.

G. M. Koselapoff

(CA 48 no.1153 '54)

ZAPROMETOV, M. N.

USSR/ Medicine - Vitamins

Card 1/1 Pub. 86 - 20/36

Authors : Zeprometov, M. N., Cand. of Biol. Sc.

Title : About a vitamin which strengthens the walls of blood capillaries

Periodical : Priroda 2, 103-106, Feb 1954

Abstract : The medicinal-therapeutical qualities of vitamin P, derived in the USSR from ordinary tea leaves, are described. The complex catechin compound, derived from tea leaves (so-called tea-tannin), was found to be highly active as a capillary strengthening medium and as a regulator of the thyroid gland. Other probable applications of the vitamin are listed. Five references: 2 USSR, 1 Swiss and 2 USA (1942-1952). Illustrations.

Institution : Acad. of Sc., USSR, The A. N. Bakh Institute of Biochemistry.

Submitted :

ZAPROMETOV M.N.

USSR

The primary formation of catechins in the tea plant.
M.M. Zaporozhets (A. N. Salkh, Inst. Biochem., Acad. Sci. USSR, Moscow, Russia) 19, 6-10-65 (31).

Four tea cultivars were employed. Catechins were found in all four tea plants. The tea plants consisted of a variety of species generally grown in Georgia. The primary catechol which is formed during the sprouting of tea-plant seeds is the simplest form of these compounds and may contribute 2-4% of the dry weight of the seedlings. As the young seedlings develop, catechols of more complex ranks are formed. At the age of 10-12 days the plants contain the complete assembly of catechins of the mature normally developed tea plant.

After the tea plants had been transplanted into the ground, gallate esters (catechins with a group of gallic acid) were found in the tea plants growing in the ground. Apparently the tea plants have the ability to extract or extract the catechins from the tea plant. Matured and etiolated tea plants at the

ZAPROMETOV, M. N.

USSR/Chemistry - Biochemistry

Card : 1/1

Authors : Zaprometov, M. N. and Soboleva, G. A.

Title : Investigation of catechin conversions during fermentation of tea by the method of paper-chromatography

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1205 - 1208, June 1954

Abstract : Paper-chromatography was applied in the study of catechin conversions taking place during the process of tea leaf fermentation. During the fermentation of tea leaves the tannic complex is subjected to enzymatic oxidation under the effect of polyphenoloxidase. This oxidation is followed by an increase in molecular weight of the tannic acid and its partial conversion into an insoluble form. Eighteen references. Table, graphs.

Institution : Acad. of Sc. USSR, The A. N. Bakh Institute of Biochemistry

Presented by : Academician A. L. Kursanov, March 4, 1954

ZAPROMETOV, M.N.

Industrial preparation of vitamin P from vegetables. A. I. Kursanov and M. N. Zaprometov (K. A. Timiryazev Inst. Plant Physiol. Acad. Sci. U.S.S.R., Moscow). *Fiziol. Rastenii, Akad. Nauk S.S.R.* 2, 287-91 (1953).—A review with 21 references. G. M. Karpeloff. (1)

ZAPROMETOV M.N.

✓ Partition chromatography of catechins. M. N. Zaprometov. Trudy Komissii Anal. Khim., Akad. Nauk S.S.R., Inst. Geokhim. i Anal. Khim. 6, 418-38 (1955).--
Partition chromatography was used to show that different parts of the tea plant contain different combinations of catechins formed by oxidation of catechin or by its esterification with gallic acid. Tannin was isolated from tea leaves, dissolved in 40-50 ml. of peroxide-free Et₂O, and passed through specially prep'd. silica gel in a graduated column. Et₂O was the displacing solvent. CO₂ or N pressure was used to increase filtration speed if necessary. The meniscus readings were noted and vol. of filtrate was plotted against the intensity of the color obtained when 5-7 drops of filtrate were added to 1.5 ml. of reagent (1 g. vanillin in 100 ml. HCl). Fe tartrate at pH 6 can also be a reagent. Only silica gel ASK-2 could be used. This was soaked in H₂O and washed with boiling H₂O, hot alc., HCl, and finally H₂O until chloride-free. It was dried, sifted, and dried again. By repeated adsorption of sepd. fractions on silica gel dl-gallocatechin (I), l-epigallocatechin (II), l-epicatechin gallate (III), dl-catechin (IV), l-epigallocatechin gallate (V), l-epicatechin (VI), and l-gallocatechin gallate (VII) were sepd. Tea was extd. 3 times with boiling H₂O. The exts. were treated at 60-90° with 40% Pb(OAc)₂ until complete pptn. The ppt. was filtered off, washed with very dil. Pb(OAc)₂, and treated with 5-10% H₂SO₄. The resultant red filtrate was extd. 3 times with Et₂O. The Et₂O ext. was treated with 5% Na₂O₂ until a weak alk. reaction in the aq. layer, then washed with H₂O, dried over MgSO₄, evapd. in vacuum under CO₂ to 1/2

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30-40 ml., and passed through silica gel. III and IV were sepd. The filtrate from the $\text{Fe}(\text{OAc})_2$ pptn. was brought to pH 8.0 with 5% NaOH. The ppt. was filtered off and treated with 5-10% H_2SO_4 . The filtrate from this was extd. with Et_2O . The Et_2O ext. was dried over MgSO_4 , evapd. in vacuum under CO_2 to 60 ml., and passed through silica gel. Only the last of 3 fractions gave a vanillin test. This fraction sepd. on silica gel to give 3 more fractions; the last 2 were IV and VI. A complete quant. analysis of Georgian tea tannin shows that Ceylon tea tannin contains less gallic catechins and almost twice as much simple catechins. Analysis of 2-leaf shoots and the 5th and 6th leaves shows that as the growing leaves get older VI and IV decrease and II and I increase. Expts. with paper chromatography showed that the aq. tea ext. could be used instead of the isolated tannin. Tea leaves (6 g.) were triturated with 20 ml. H_2O at 50°. The ext. was squeezed through cloth and centrifuged. The clear liquid was stored in the cold; 5-10 μl . were placed on paper. For a 1-dimension chromatogram the solvent was n-BuOH-AcOH- H_2O (40:12:29); in 2-dimension chromatograms this was the second solvent and PhOM-AcOH- H_2O (50:4, H_2O to satn.) was the first. Color was developed with vanillin reagent. Chromatograms show the oxidation of tannins during tea processing.

Eurilla Mayerle

(Clipped Abstract)

ZAPROMETOV, M.H., kandidat biologicheskikh nauk.

Obtaining vitamin P from tea leaves. Vest.AN SSSR 25 no.8:56-57
Ag '55. (MLRA 9:1)

(Vitamins - P) (Tea)

JAMINS, W.O.; ZAPROMETOV, M.N., [translator]; PAVLINOVA, O.A. [translator];
NICHIPOROVICH, A.A., professor, redaktor; GRIBOVA, M.P., tekhnicheskiy redaktor

[Plant respiration. Translated from the English] Dykhanie rastenii.
Perevod s angliiskogo M.N.Zaprometova i O.A.Pavlinovoi. Pod red. i
s predisl. A.A.Nichiporovicha. Moskva, Izd-vo inostrannoi lit-ry,
1956, 439 p.

(Plants--Respiration)

ZDPPHO Dn ETOV, N.G.
POSPELOV, A.G.; ZAPROMETOV, N.G.; DOMASHEVA, A.A.; NIKITINA, Ye.V.; red.;
TSYBINA, Ye.V., tekhn.red.

[Fungi of the Kirghiz S.S.R.] Gribnaia flora Kirgizskoi SSR.
Frunze, Izd-vo AN Kirgisskoi SSR. No.1. [Systematic list of
species and geographical distribution] Sistematischesko-vidovoi
sostav i geograficheskoe rasprostranenie. 1957. 128 p.
(Kirgizistan--Fungi) (MIRA 11:6)

ZAPROMETOV, M.N.

ZAPROMETOV, M.N.

Catechin, a vitamin P preparation obtained from tea leaves. Klin.
med. 35 no.11:148 N '57. (MIRA 11:2)
(VITAMIN - P) (CATECHOL) (TEA)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1

ZAFERONOV, M. N. and KURSANOV, A. L.

"A Study of the Formation and Transformations of Catechins in Tea Leaves by
Means of $^{14}\text{CO}_2$." Atompraxis, No. 7-8, Jul/Aug 58. (Germany)

INST. PLANT PHYSIOLOGY, ACAD. SCI. USSR, MOSCOW.

in TIMIRYAZEV

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

BARDINSKAYA, Margarita Sergeyevna [deceased]; KURSANOV, A.L.,
akademik, otv. red.; MANSKAYA, S.M., red.; MOSKALEVA,
V.Ye., red.; SHUBERI, T.A., red.; ZAIROV, M.N., red.;
PAVLINOVA, O.A., red.

[Plant cell walls and their formation; some problems of
the chemistry, biochemistry and physiology of lignifi-
cation] Rastitel'nye kletochnye stenki i ikh obrazova-
nie; nekotorye voprosy khimii, biokhimii i fiziologii
odrevesneniya. Moskva, Nauka, 1964. 158 p.
(MIRA 18:1)

ZAPROMETOV, M.N.; KOLONKOVA, S.V.

Diurnal dynamics of catechins and their alicyclic precursors
(quinic and shikimic acids) in a tea plant. Fiziol.rast. 12
no.4:646-652 Jl-Ag '65. (MIRA 18:12)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR,
Moskva. Submitted December 30, 1964.

ZAPROMETOV, M. N.

"The ability of leaves of different ages to synthesize phenolic substances."

report submitted to 10th Intl. Botanical Cong., Edinburgh, 3-12 Aug 64.

AS USSR, Moscow.

HAIS, Ivo, red.; MATSEK, K., red.; VOL'FSOY, B.M. [translator];
ZAPROMETOV, M.N., red.

[Chromatography on paper] Khromatografiia na bumage.
Pod red. M.N.Zaprometova. Moskva, Izd-vo inostr. lit-ry,
1962. 851 p. (MIRA 16:8)

(Paper chromatography)

ZAPROMETOV, M.N.

Caffeine formation in tea plant shoots. Biokhimiia 27 no.4:679-
684 Jl-Ag '62. (MIRA 15:11)

1. Institute of Plant Physiology, Academy of Sciences of the
U.S.S.R., Moscow.
(CAFFEINE) (TEA)

ZAPROMETOV, M.N.

Biosynthesis of catechols in tea shoots. *Fiziol. rast.* 10 no.1:
73-78 Ja-F '63. (MIRA 16:5)

I. K.A.Timiriazev Institute of Plant Physiology U.S.S.R.
Academy of Sciences, Moscow.
(Catechol) (Tea)

ZAPROMETOV, M.N.

Mechanism of catechin biosynthesis. *Biokhimiia* 27 no.2:366-377
(MIRA 15:8)
Mr-Ap '62.

1. Institute of Plant Physiology, Academy of Sciences of the
U.S.S.R., Moscow.
(CATECHOL) (BIOSYNTHESIS)

ZAPROMETOV, M.N.

Producing preparations of uniformly labeled C¹⁴-shikimic acid.
Biokhimiia 26 no.4:597-602 Jl-Ag '61. (MIRA 15:6)

1. Institute of Plant Physiology, Academy of Sciences of the
USSR, Moscow.

(SHIKIMIC ACID)
(CARBON-ISOTOPES)

KURSAMOV, A.L., akademik; ZAPROMETOV, M.N., kand.biologicheskikh nauk

Catechins. Zdorov'e 8 no.4:6-7 Ap '62.
(CATECHIN) (TEA--PHYSIOLOGICAL EFFECT)

(MIRA 15:4)

ZAPROMETOV, M.N.; BUKHLAYEVA, V.Ya.

Free gallic acid in tea leaves. Dokl. AN SSSR 151 no.1:231-233
J1 '63. (MIRA 16:9)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR.
Predstavлено академиком A.L.Kursanovym.
(Gallic acid) (Tea)

ZAPROMETOV, M.N.

Modern concepts of the biosynthesis of aromatic compounds.
Usp. biol. khim. 6:264-303 '64. (MIRA 18:3)

I. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR,
Moskva.

ZAFROMETOV, M.N.; KARIMZHANOV, A.K.

Separation of (4)-catechol from the cotton plant. Dokl. AN SSSR 158
no.3:726-729 S '64. (MIRA 17:10)

1. Institut fiziologii rastenij im. K.A.Timiryazeva AN SSSR i Institut
khimi polimerov AN UzSSR.

SHAMRAY, Ye.F.; ZAPROMETOV, M.N.

Localization of radioactivity in the tissues of guinea pigs
following injection of C¹⁴-catechols into the organism.
Biokhimia 29 no.4:697-700 Jl-Ag '64.

(MIRA 18:6)

1. Kafedra biokhimii Meditsinskogo instituta, Kiyev, i Institut
fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva.

SMOLENSKIY, V.S.; YEROFEEVA, N.N.; PANKRATOVA, N.F.; ZAPROMETOV, M.N.

Effect of vitamins P and C on the development of experimental atherosclerosis. Vit. res. i ikh isp. no.4:158-170 '59. (MIRA 14:12)

1. Gospital'naya terapeuticheskaya klinika 1-go Ordona Lenina
medinstituta; Institut biokhimii im. A.N.Bakha AN SSSR, i Institut
fiziologii rasteniy im. K.A.Timiryazeva AN SSSR, Moskva.
(VITAMINS--P) (ASCORBIC ACID)
(ARTERIOSCLEROSIS)

ZAPROMETOV, M.N.; AGAPOVA, Ye.V.; MALITSKAYA, I.Ye.

Determining vitamins P and C in tablets and dragées containing a catechin complex and ascorbic acid. Vit. res. i ikh isp. no.4:207-212 '59. (MIRA 14:12)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR i Shchelkovskiy vitaminnyy zavod.
(VITAMINS—P) (ASCORBIC ACID)
(DRUGS—ADULTERATION AND ANALYSIS)

ZAFROMETOV, M.N.; YEROFEYEEVA, N.N.; DERGACHEV, I.S.; PCTAPOVA, I.N.

Nontoxicity of increased doses of the vitamin P preparation (a catechin complex) in a prolonged experiment. Vit. res. i ikh isp. no. 4:135-139 '59. (MIRA 14:12)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR; Institut biokhimii im. A.N.Bakha AN SSSR i Institut pediatrii Akademii meditsinskikh nauk SSSR, Moskva.
(VITAMINS--P)

ZAPROMETOV, M.N.

Vitamin P and its use. Vit. res. i ikh isp. no.4:5-29 '59.
(MIRA 14:12)
1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR, Moskva.
(VITAMINS--P)

ZAPROMETOV, M. N. (USSR)

"Catechin Biosynthesis in Tea Plant"

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

ZAPROMETOV, M.N.

Isolation of quinic and shikimic acids from shoots of the tea plant.
Biokhimiia 26 no.2:373-384 Mr-Ap '61. (MIR 14:5)

1. Institute of Plant Physiology, Academy of Sciences of the U.S.S.R.,
Moscow. (TEA) (SHIKIMIC ACID) (QUINIC ACID)

ZAFROMETROV, M.N.

Tea as raw material for commercial production of vitamin P preparations. Biokhim. chain. proizv. no.8:198-203 '60. (NIRA 14:1)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR,
Moskva.

(Tea)

(Vitamins--P)

ZAPROMETOV, M.N., kand.biol.nauk

Vitamin which increases vascular impermeability. Priroda 49 no.9:
92-94 S '60. (MIRA 13:10)

1. Institut fiziologii rastneiy AN SSSR, Moskva.
(BLOOD VESSELS--PERMEABILITY) (VITAMINS--P)

ZAPROMITOV, M.N.

Composition of the tannin complex of the tea plant. Bickhim.chain,
proizv. no.7;114-132 '59.
(MIRA 13:5)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR,
Moskva.

(TANNINS)

(TEA)

13(3)

AUTHOR:

Zaprometov, M. N.

SOV/20-125-6-52/61

TITLE:

On the Ability to Split the Benzene Ring in Higher Plants (O sposobnosti k rasshchepleniyu benzol'nogo kol'tsa u vysshikh rasteniy) Thoroughgoing Oxidation of C¹⁴-catechins in Sprouts of Tea Plants (Glubokoye okisleniye C¹⁴-katekhinov v pobegakh chaya)

PERIODICAL:

Deklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1359-1362 (USSR)

ABSTRACT:

The ability of many microorganisms to oxidize various polyphenols (including the polycyclic ones) has been known for a very long time. In this process energy accumulated in these compounds is utilized (Refs 1-4). This oxidation is concurrent with a splitting of the benzene ring. One of the first oxidation products is the non-cyclic cis-cis-β-carboxy-nuconic acid. It is then converted into β-keto-adipic acid, and finally into succinic- or oxalic acid (Refs 5,6). It was furthermore found that animal tissues use to oxidize the aromatic amino acids L-tyrosine and L-phenyl-alanine into malic acid. Quite recently a ferment system was discovered in rabbit kidneys and livers which, under aerobic conditions, effects an extensive oxidative split-

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On the Ability to Split the Benzene Ring in Higher
Plants. Thoroughgoing Oxidation of C¹⁴-catechins in
Sprouts of Tea Plants

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ting of the flavoneids rutin and quercetin (Ref 9). There are no such data with regard to higher plants. It is in this very field, however, that the problem mentioned in the title is of paramount significance, as these higher plants synthesize and accumulate a great variety of polyphenol compounds. So far, however, the role played by these compounds has not been definitely clarified. Thus the participation of polyphenols as hydrogen transmitters in respiration requires only catalytic quantities thereof. The tea plant, however, accumulates up to 30% of its dry weight in tannins. On earlier occasions (Refs 10, 11) the author had assumed that the tea plant is capable of consuming the polyphenol compounds (catechins) by extracting the energy contained in these compounds. The information under review experimentally confirms this doctrine. Table 1 shows the results which indicate that the C¹⁴-catechin oxidation in young tea sprouts has, as it were, two stages: (a) between 25 and 45 hours (according to permeability) a small quantity of C¹⁴O₂ (not more than 5-10% of the quantity introduced) is removed; (b) during the following 20-30 hours, the C¹⁴-catechins intro-

Card 2/3

On the Ability to Split the Benzene Ring in Higher Plants. Thoroughgoing Oxidation of C¹⁴-catechins in Sprouts of Tea Plants

SOV/20-125-6-52/61

duced are rapidly oxidized; the C¹⁴O₂ quantity removed amounts to 73-82%. Figure 1 shows the removal curves on infiltration and absorption. From the results obtained it may be concluded that not only catechin formation (Ref 10), but also catechin utilization for respiratory ferment takes place in the young sprouts of the tea plant. In this process, the benzene nuclei of catechin molecules are split, and their splinters, after several conversions, are removed in the form of carbon dioxide. Thus catechins take an extremely active part in the metabolism of the tea plant. In conclusion, the author establishes various hypotheses for the explanation of the processes described. There are 1 figure, 1 table, and 16 references, 6 of which are Soviet.

ASSOCIATION: Institut fiziology rasteniy im. K. A. Timiryazeva Akademii nauk SSSR (Institute of Plant Physiology imeni K. A. Timiryazev of the Academy of Sciences USSR)

PRESENTED: January 14, 1959, by A. L. Kursanov, Academician

SUBMITTED: January 13, 1959
Card 3/3

ZAPROMETOV, M.N.

Quantitative determination of catechins by paper partition chromatography. Fiziol. rast. 5 no.3:296-300 My-Je '58. (MIRA 11:6)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk -
SSSR, Moskva.

(Catechol--Analysis)
(Paper chromatography)

ZAPROMOTOV, M. N. Moscow, USSR.

"Study of Formation and Transformation of Catechins in the Tea Plant."

report submitted IV Intl. Cong. of Biochemistry, Vienna, 1 - 6 Sep 1958.

ZAPROMETOV, M.N. (Moscow)

Tannins of the tea plant. Usp.sovr.biol. 45 no.2:200-217 Mr-Ap '58
(MIRA 11:6)

(TANNINS)
(TEA)

18402-65 ENG(j)/ENI(h) AID/AEWL/SSD

ACCESSION NR: AF4013942

AUTHOR: Shamray, V. F.; Zaprometov, N. N.

TITLE: Localization of radioactivity in tissues after the administration of C-14 catechols in the organism

SOURCE: Biokhimiya, v. 29, no. 4, 1964, 697-700

TOPIC TAGS: radioactivity, C14 catechol, scurvy, polyphenole, C14 catechin, adrenal, spleen, liver, kidney

ABSTRACT: A fraction containing lipoprotein, dehydroascorbic acid, and a phenolic component had previously been isolated from beef adrenals and spleen. The content of this fraction in tissues of guinea pigs was significantly decreased in scurvy, but was restored to its normal level by an antiscurvy treatment consisting of a combination of vitamins C and P. The possibility of incorporating polyphenoles into this fraction was studied in scurvy-affected animals treated with a preparation containing ascorbic acid and C14-labelled tea-plant catechins. After treatment for 10 days, the

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ACCESSION NR: AP4043942

2

animals were sacrificed and the fraction under investigation was extracted from the tissues and organs by means of an ethanole-dichloroethane mixture (1:1). Radioactivity was found only in this fraction. The highest C¹⁴ content was found in the adrenals; C¹⁴ was also recorded (in order of decreasing concentration) in the spleen, liver, kidney, and muscles. The phenolic component could be found in the fraction studied only after alkaline hydrolysis. This component gives a negative qualitative catechine test (with a vanillin reagent), but yields blue coloration with a reagent containing FeCl₃ + K₃Fe(CN)₆. It is concluded that some phenolic fragment of catechins may be a biochemical component of the animal organism.

Orig. art. has: 1 table.

ASSOCIATION: Kafedra biokhimii Meditsinskogo instituta, Kiev
(Department of Biochemistry, Medical Institute); Institut fiziologii rastenij im. K. A. Timiryazeva Akademii nauk SSSR, Moscow (Institute of Plant Physiology, Academy of Sciences SSSR)

SUBMITTED: 02 Dec 63

ENCL: 00 SUB-CODE: LS

NO REF SOV: 007

OTHER: 006

Card 2A2

Country : USSR
Category: Plant Diseases. Diseases in Cultivated Plants.

Abs Jour: RZhBiol., No 18, 1958, No 82689

Author : Zaprometov, N.G.

Inst : ~~Uzbek Agricultural Academy~~
Title : General Trends in the Study of Diseases of the Cotton
Plant and Alfalfa

Orig Pub: V sb.: Materialy Ob'yedin. nauchn. sessii po khlopkovedstvu.
T. 2, Tashkent, Gosizdat UzSSR, 1958, 227-229

Abstract: No abstract.

Card : 1/1

AM

ZAROKEVROV (N. G.). Bozarm Xiong'anika. [Diseases of the Cotton plant.—Hayku-aceedam. Изв. Академии. Cepus usrenus spesimenes u bozarm Xiong'anika. [Scient. Res. Inst. for Cotton Industry. Study series on Cotton pests and diseases]. Tashkent, issue 1, 34 pp., 22 figs., 1920. [English summary.]

In this pamphlet brief accounts are given of the principal parasitic diseases and physiological troubles of the cotton plant and cotton lint in Russian Central Asia [cf. R.A.M., vii, p. 374]. Extensive surveys have shown that wilt (*Fusarium eurisectans*) is steadily spreading; in 1920, in particular, it was found in practically all the cotton plantations of Uzbekistan [formerly Russian Turkestan], especially on the lighter soils; it was noted, however, that on soils with a high content of common salt, e.g. in the Golodnaya Steppe, the incidence of wilt is very slight. Under local conditions the fungus does not form cankers or wounds on the collar of the cotton plants, and it was never seen to fructify on living plants in nature. There was, however, experimental evidence that both micro- and macroconidia may be formed in the spring on dead infected cotton stems remaining over winter in the field, this forming a probable source of aerial infection at the renewal of vegetation, although the disease is chiefly carried in the soil, in which the fungus is apparently capable of living indefinitely as a saprophyte on dead plant debris. It is believed

Cotton, 1920

REF. SLA METALLURGICAL LITERATURE CLASSIFICATION

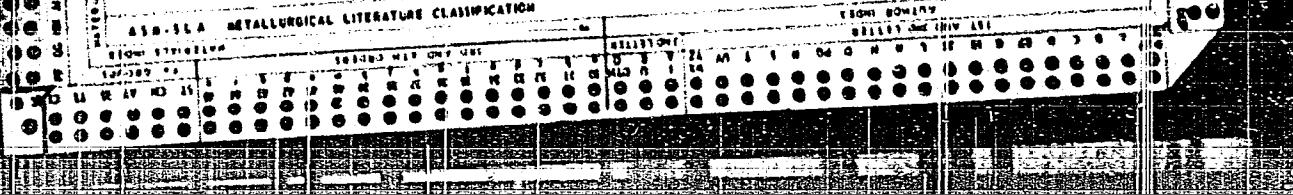
that the local strain of *Fusarium* may be different from the strains that have been described from other cotton-growing countries. In Central Asia the wilt disease has been recorded also on a number of other cultivated plants, but so far only the strain from *Hibiscus esculentus* has been found capable of infecting cotton. All cotton varieties cultivated in the locality appear to be more or less susceptible to wilt, although some exhibit a relatively high degree of resistance. The control measures recommended are the removal and destruction by fire of all cotton plants and debris after the harvest, the replacement of stable manure by artificial fertilizers, since it has been shown that stable manure greatly increases the incidence and virulence of the disease, the avoidance of too abundant irrigation, and the use of resistant varieties.

Collar canker (*Fusarium bucharicum*) [see next abstract] was very prevalent in 1928 on all varieties of Asiatic cotton (*Gossypium hericum*), of which the Bokhara variety appears to be the most susceptible. The disease differs from the wilt due to *F. oxysporum* chiefly in its acute character, the diseased plants being very rapidly killed, and in the formation of definite swellings or cankers at the collar; the cankers are usually covered with a slight pale to dark blue black, dark green, pink, or white efflorescence of conidia, the blue colour being predominant. Infection may occur during the whole period of vegetation of the host, and artificial inoculation experiments have shown that it may take place either from infected

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seeds to the seedlings or through wounds in the developing plants. In these experiments the incubation period was from 2½ to 3½ weeks in the case of infected seed, and from 1½ to 3½ weeks in inoculations through wounds. In heavily infected cases the death rate may be as high as 70 per cent, and cases were also recorded when the whole crop was lost. So far all the American varieties (uplands) of cotton tested have proved to be immune from *F. bimaculatum*, even when sown together with infected Asiatic varieties.

Both American and Asiatic varieties of cotton also suffer, although to a somewhat lesser degree than from the two diseases above-mentioned, from angular leaf spot and black arm disease (*Bacterium malvacearum*) [see preceding abstract]. Of minor economic importance are root rots, usually found to be associated with species of *Flavarium*, *Verticillium*, *Rhizoctonia*, and an undetermined species of *Aegerita* (according to unpublished data the last-named fungus was very prevalent in 1929); black root rot caused by *Thielaviopsis basicola* [ibid., viii, p. 613]; a leaf spot caused by *Phyllosticta gossypina* [ibid., viii, p. 373], and rooty moulds. All the diseases of cotton lint dealt with are included in Jaczowski's recent paper [ibid., ix, p. 307].



ZAPROMETOFF (N. G.). Мутилья роса Хлопчатника. [Powdery mildew of Cotton.]—Хлопковое Дело [Cotton Industry], 1930, Tashkent, 1, pp. 143-145, 2 figs., 1930.

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The author states that in August, 1929, powdery mildew was recorded for the first time in Russian Central Asia on a bush each of the Egyptian cotton variety Nubari and of the American Upland variety Triumph Navrotzky. Macroscopically the disease is very similar to the West Indian cotton mildew (*Ovuluriopsis gossypii*) in St. Vincent [*R.A.M.*, vii, p. 618], but the spots bear both conidia and perithecia and the fungus is identified as a new form of *Lecanilla* (*Ovuluriopsis*) *taurica*, which is named *L. (O.) taurica* f. *gossypii*. The conidia are formed singly on conidiophores of the *Ovuluriopsis* type; they are hyaline, ellipsoïd-cylindrical, and 43 to 50 by 13.2 μ in diameter. The perithecia are black, immersed in the mycelial mat covering the spots, globular, 157 to 173 μ in diameter, and are supplied on their lower surface with numerous hyaline, intertwining appendages up to 3 μ broad. The perithecia contain up to 14 ascii, 78 to 80 by 23 to 33 μ , each with two ascospores measuring 23.6 to 29.7 by 16.8 μ .

The diseased cotton plants were growing in close proximity to weeds (*Eryngium lobigerum* and *Alliagi camedorum*) abundantly infected with *O. taurica*, a fact which suggests the possibility that

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(the outbreak on cotton may either have been a causal sub-infection
or may mark the first stage in the mutation of the parasite to
adapt itself to a new host.

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ZAPROMETOV (N.). Список болезней новых лубяных культур Средней Азии. [List of diseases of new fibre plants in Central Asia]—из Болезни и вредители новых лубяных культур [Diseases and pests of new cultivated textile plants], pp. 20–21.
Новоземест. ВАСХНИЛ [Inst. New Bast Raw Material VASKhNIL], Moscow, 1933.

This is a very brief annotated list [arranged by the hosts] of the chief diseases and troubles recorded up to 1932 of the following newly introduced fibre-yielding plants in Russian Central Asia: kendir fibre (*Apocynum sibiricum*) [*A. venetum*], ambari hemp (*Hibiscus cannabinus*), American jute (*Abutilon avicinare*), okra (*H. esculentus*), sunn hemp (*Crotalaria juncea*), ramie (*Baumleria nivea*), jute (*Crochorus capularia*), and hemp (*Cannabis sativa*). [Most of the diseases listed are mentioned in the following abstracts.]

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

ECONOMIC SCIENCE

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ECONOMIC SCIENCE

ZAPROMETOV, N. G.

ZAPROMETOV, N. G. "Gummosis of Kendir," in Diseases and Pests

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963810020-1
Bast Fiber Raw Materials, Moscow, 1933, p. 12, 4ch.04 K85

So: Sira - Si - 90 - 53, 15 December 1953

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CIA-RDP86-00513R001963810020-1

ZAPROMETOV, N. G.

ZAPROMETOV, N. G. "Cotton Gummosis and Its Control," Bor'ba za
Khlopot, no. 6-7, 1934, pp. 61-70. 72.8 B64

So: Sira - Si-90 - 53, 15 December 1953

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

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ЗАРНОМЕТОФФ (Н. Г.). Гомкоз Хлопчатника и борьба с ним. [Cotton gummosis and its control.]—Борьба за Хлопок [Fight for Cotton], Tashkent, 1934, 6-7, pp. 61-70, 4 figs., 1934.

This is a very brief, popular account of cotton gummosis (*Bacterium malvacearum*), based chiefly on Massey's work in the Sudan [*R.A.M.*, xiv, p. 96 *et passim*] and on Stoughton's researches on the organism in England [*ibid.*, xiii, p. 301 *et passim*]. The disease is stated to occur wherever cotton is cultivated in the U.S.S.R., and to be fairly destructive in Central Asia, especially on Egyptian cottons, on which the black-arm form of the disease frequently causes losses up to 60 per cent. or more. While no cotton varieties have been found in Russia to be entirely immune from gummosis, recent data received from Transcaucasia would indicate that locally the 'King-karayazski' No. 915 variety exhibits the greatest relative resistance. Experiments in 1929 showed that the incidence of the disease was reduced from 4.3 to 0.3 per cent. by applications of 300 kg. ammonium nitrate per hectare. Control measures, also based on work done abroad, are briefly discussed.

APPENDIX A METALLURGICAL LITERATURE CLASSIFICATION

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ZAPROMETOFF (N. G.) & MIKHAILOFF (E. N.). Болезни Шелковицы.
[Mulberry diseases.]—Tp. Cp.-Azaam. Научно-Исслед. Инст.
Мексике. [Trans. Cent.-Asian sci. Res. Inst. Sericult.], Tashkent,
1937, 14, 50 pp., 16 figs., 2 graphs, 1937. [English summary.]

According to Zaprometoff, the results of investigations in 1935 in the neighbourhood of Tashkent, Russian Central Asia, showed that mulberry blight (*Bacterium morti*) [R.A.M., xvi, p. 73] attacks all mulberries of a shrub-like habit of growth, while semi-standard and standard trees are usually immune; among the former the most susceptible was the Japanese species *Morus kuyamiae*, while the Japanese *M. bombycis*, *M. multicaulis*, and *M. alba* came next, and the local variety Khasak of *M. alba* suffered the least. The severity of the disease was considerably increased by absence of direct sunlight and defective cultivation of the soil. Summer pruning of infected shoots, together with disinfection of the cut ends with formalin (1 in 100) proved to be an effective means of control against blight of the Japanese mulberries. Investigations have shown that the disease is widespread in Uzbekistan, and is also present in other mulberry-growing regions of the U.S.S.R., namely, Kirghizia, Tadzhikistan, Bashkir Republic, Ukraine, North Caucasus, and Transcaucasia.

ASIA-SEA METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION		SUBDIVISION	
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

Mikhailoff gives an account of isolation and cultural studies which showed that the morphological, cultural, serological, and pathogenic properties of *End. mori* are strikingly constant, irrespective of the source of origin, nature of substratum, or age (up to three years) of the source studied. In nature it is frequently accompanied by a strain negative rod, non-pathogenic to the mulberry. Experiments showed that neither organism is pathogenic to the silkworm.

An account is further supplied by Zaprometoff of his studies on the leaf spot of the mulberry, caused by *Cylindrosporium* of his studies on the Jacz. (syn.: *Septoglocus*) *mori* Br. & Cav., and *Phleospora maculans* (All.) which chiefly attacks the local (Khasak) shrub-like mulberry, while hybrids between the local and the Japanese varieties are apparently immune. Infection and intensity of the disease are favoured by crowded conditions in the plantations and lack of proper cultivation, and pruning retards the development of the trouble.

The pamphlet terminates with a list, compiled by Zaprometoff, of 23 mulberry diseases recorded up to 1935 in the neighbourhood of Tashkent and in the Fergana valley, including *C. moricola* Jacz. (syn. *P. moriola* [(Pass.)] Sacc. [*Mycosphaerella* *mori*: *ibid.*, xv, p. 67]), *Uncinula mori*, *Phyllactinia corylea* [*ibid.*, xvi, p. 491], *Botrytis cinerea*, and ten non-parasitic diseases.

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CIA-RDP86-00513R001963810020-1

ZAPROMETOV, N. G.

ZAPROMETOV, N. G. "Bacterial Rot of Melons and Its Control,"
Sad i Ogorod, no. 5, 1950, p. 42. 80 Sal3

So: Sira - Si - 90 -53, 15 December 1953

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

ZAPROKETOV, N. G.

"Hibernation of the Causative Agent of Oidium in Uzbekistan Grapes", Viniculture and
Viticulture USSR, No. 4, pp 42-43, 1951.

ZAPROMETOV, N. G.

Bolezni korobochek i volokna khlopchatnika (Diseases of cotton bolls and fibers).
Tashkent, Gosizdat Uzb. SSR, 1952. 16 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 6, Sep. 1954

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1

ZAPROMETOV, N.G.

Development of mycology and phytopathology in the Uzbek S.S.R.
Trudy VIZR no.23:304-312 '64. (MIRA 19:2)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1

ZAPROMETOV, N.G.

The faculty's 25th anniversary. Zashch. rast. ot vred. i bol. 7
no.11:61-62 N 62. (MIRA 16?)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

ZAPRUMTOV, N.G., prof.

Observe strictly prophylaxis. Zashch. rast. ot vred. i bol. 7
no.12:47 D '62. (MIRA 16:7)

(Soviet Central Asia—Plants, Protection of)

USPENSKIY, F.M., kand. biol. nauk; SOMOV, I.A.; MUMINOV, A.M.,
kand. sel'khoz. nauk; IVANOV, Ye.N., kand. biol. nauk;
VASIL'YEV, A.A., kand. sel'khoz. nauk; SOLOV'YEVA, A.I.,
kand. sel'khoz. nauk; ZAPROMETOV, N.G., doktor sel'khoz.
nauk; YAKHONTOV, V.V., doktor biol. nauk; KAPUSTINA, R.I.;
STROMM, N.G.; POLEVSHCHIKOVA, V.N., kand. sel'khoz. nauk;
KARIMOV, M.A., doktor biol. nauk; NOSKOV, I.G., kand. sel'-
khoz. nauk; KHODZHAYEV, A.Kh.; ALEYEV, B.G., kand. sel'khoz.
nauk; YAKHONTOV, V.V., doktor biol. nauk; STEPANOV, F.A.;
LYUBETSKIY, Kh.Z., kand. med. nauk; GUREVICH, B.E.;
KONDRAT'YEV, V.I.; SUDARS, L.P.; KOSTENKO, I.R., zasl. agr.
Uzbekskoy SSR; GORELIK, I.M., red.; BAKHTIYAROV, A., tekhn.
red.

[Manual on controlling the pests, diseases and weeds of cot-
ton, corn, and legumes] Spravochnik po bor'be s vrediteliami
i bolezniami khlopcchatnika, kukuruzy i bobovykh kul'tur. Izd.2.,
perer. i dop. Tashkent, Gos.izd-vo UzSSE, 1963. 325 p.

(MIRA 16:5)

(Field crops—Diseases and pests)
(Weed control)

ZAPROMETOV, N.G.

[Diseases of the mulberry tree] Bolezni shelkovitsy. Tashkent,
Gos. izd-vo UzSSR, 1953. 97 p. (MIRA 11:9)
(Mulberry--Diseases and pests)

ZAPROMETOV, N.S.

Coordinating conference on the problem "Pasture vegetation and
methods of increasing the yields and nutritive value of pasture
feeds." Uzb. biol. zhur. no.2:79-80 '58. (MIRA 11:10)
(Uzbekistan--Pastures and meadows--Congresses)

ZAPROMETOV, S.G.; DONSKOY, P.V.

Over-all utilization of water resources in Uzbekistan and
contiguous regions. Izv. AN Uz.SSR. Ser. tekhn. nauk no. 3:88-90 '58.
(MIRA 11:8)

(Uzbekistan--Water resources development)

ROZHDESTVENSKIY, Ye.D.; ZAPROMETOV, S.G., kand. tekhn. nauk, otv.
red.; ASTAKHOV, A., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Forest soils of Uzbekistan as materials for earthen dams]
Lessovye grunty Uzbekistana kak material dlja zemlianykh
plotin. Tashkent, Izd-vo Akad. nauk UzSSR, 1962. 204 p.
(MIRA 16:4)

(Uzbekistan—Earthwork)

ZAPROMSTOV, S.G.

General principles of planning and building temporary hydraulic structures on sagging loessial grounds. Izv. AN Uz.SSR no.1:95-103 '53. (MIRA 11:3)
(Loess) (Hydraulic engineering) (Soil mechanics)

RIZAYEV, Sh.K.; SAFROMETOV, S.G., otvetstvennyy redaktor; BICHEROVA, A.M.,
redaktor Izdatel'stva; GOR'KOVAYA, Z.P., tekhnicheskiy redaktor

[Theory of soil resistance to displacement] K teorii soprotivleniya
grunтов udvigu. Tashkent, Izd-vo Akademii nauk Uzbekskoi SSR, 1956.
48 p.

(Soil mechanics)

URAZBAYEV, Dr. M. T., ZAFAROV, S. G.

Dams.

New principles in planning water barriers. Gidr. stroi. 21 no. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1953? Unclassified.

ABAL'YANTS, B. I., kand.tekhn.nauk, red.; ALIMOV, B.A., red.; ALTUNIN, S.T., doktor tekhn.nauk, red.; VYAGO, A.S., red.; ZAFAROV, S.G., red.; MUKHAMEDOV, A.M., kand.tekhn.nauk, red.; NIKITIN, I.K., kand.tekhn.nauk, red.; POPOVA, K.L., red.; POSLAVSKIY, V.V., akademik, red.; ROSSINSKIY, K.I., kand.tekhn.nauk, red.; URAZBAYEV, M.T., doktor tekhn.nauk, red.; IVANENKO, T.A., red.izd-va; GOR'KOVAYA, Z.P., tekhn.red.

[Channel processes and hydraulic engineering; papers of a coordination conference, June 7-12, 1955] Rulovye protsessy i gidrotekhnicheskoe stroitel'stvo; materialy koordinatsionnogo soveshchanija 7-12 iunija 1955 g. Tashkent, Izd-vo Akad. nauk Uzbekskoj SSR, 1957. 416 p. (MIRA 11:5)

1. Akademiya nauk SSSR. Sektsiya po nauchnoi razrabotke problem vodnogo khoziaistva. 2. Sredneaziatskiy politekhnicheskiy institut (for Abal'yants). 3. Ministerstvo vodnogo khozyaystva UzSSR (for Alimov). 4. Sredneaziatskiy nauchno-issledovatel'skiy institut irrigatsii (for Vyago, Nikitin). 5. Institut snoruzheniy AN UzSSR. (for Altunin, Zafarov, Mukhamedov, Urazbayev). 7. Chlen-korrespondent AN UzSSR (for Alimov, Altunin, Vyago). 8. Akademiya nauk UzSSR (for Poslavskiy)
(Hydraulic engineering)

SHINSKIY, G.E., kand.med.nauk; VEVER, R.E.; GALANOVA, G.V., SIDOROVA, V.M.,
mladshiy nauchnyy sotrudnik; ZAPROMETOVA, A.P., mladshiy nauchnyy
sotrudnik; CHIBIRIAYEVA, A.D., mladshiy nauchnyy sotrudnik

Protein composition of the blood in patients with some dermatoses.
Vest.derm.i ven. no.7:21-27 '61. (MIRA 15:5)

1. Iz Ufimskogo kozhno-venerologicheskogo instituta (dir. -
starshiy nauchnyy sotrudnik P.N. Shishkin, nauchnyy rukovo-
ditel' - starshiy nauchnyy sotrudnik G.E. Shinskiy).
(SKIN--DISEASES) (BLOOD PROTEINS)

SHINSKIY, G.E., kand. med. nauk; VEVER, R.E., kand.med.nauk; CHIBIRYAYEVA,
A.D.; ZAPROMETOVA, A.P.

Functional state of the liver in lupus erythematosus. Vest. derm.
i ven. 37 no.9:14-16 S '63. (MIRA 17:6)

1. Ufimskiy kozhno-venerologicheskiy institut (dir. P.N. Shishkin)
Ministerstva zdravookhraneniya RSFSR.

MAKSUMOV, S.S.; SARSIS'YANTS, S.L.; ~~CHEREMET'YEV~~, N.N.; CHICHERIN, P.I.;
ZAPROMETOVA, L.V.; ZHURAVLEVA, N.A.

Virusological characteristics of the outbreak of poliomyelitis in
Tashkent in 1959. Vop. virus. 7 no.2;239 Mr-Ap '62. (MIRA 15:5)

1. Tashkentskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok.
(TASHKENT--POLIOMYELITIS)

MAKSUMOV, S.S.; ZAPROMETOVA, L.V.

Isolation of the ECHO group of viruses during the course of an epidemic outbreak of poliomyelitis in Tashkent; preliminary report. Med. zhur. Uzb. no.2:17-19 F '62. (MIRA 15:4)

1. Iz Tashkentskogo nauchno-issledovatel'skogo instituta vaktsiny i syvorotok Ministerstva zdravookhraneniya SSSR (direktor A.B.Inogamov).
(VIRUSES) (TASHKENT--POLIOMYELITIS)

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CIA-RDP86-00513R001963810020-1

ZAPROMETOVA, N.S.

Shrub-type Salsola from Uzbekistan deserts; regarding their
introduction into cultivation. Trudy Inst. bot. AN Uz.SSR
№.5:309-336 '59. (MIRA 14:5)
(Uzbekistan--Salsola)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

ZAPROMETOVA, N.S.

Water cycle of certain plants from desert foothill plains under
natural conditions and under cultivation. Uzb.biol.zbir. no.2;
3-7 '60. (MIRA 14:5)

I. Institut botaniki AN UzSSR.
(KYZYL KUM--XEROPHYTES) (PLANTS--WATER REQUIREMENTS)

ZAPROMETOVA, N.S.

Conference on the use and improvement of desert pastures. Uzb.
biol. zhur, no.2:60-62 '61.
(MIRI 1415)
(UZBEKISTAN--PASTURES AND MEADOWS)

BURYGIN, V.A.; ZAPHOMETOVA, N.S.

End of the spring growing season in some ephemeral and ephemeral plants of southern Kyzyl-Kum. Uzb.biol.zhur. no. 4:
10-13 '59. (MIRA 13:1)

1. Institut botaniki AN UzSSR.
(Kyzyl-Kum—Desert flora)

ZAPROMETSOVA, N. S.

"The Domestic Saltwort of the Uzbekistan Desert (Problems
Involved in Its Introduction and Cultivation)." Cand Biol Sci,
Central Asian U, Tashkent, 1954. (RZhBiol, No 4, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institu-
tions (14).

BURYGIN, V.A.; ZAPROMETOVA, N.S.

Water cycle of certain plants of the low Nura-Tau Mountains.
Trudy Inst. bot. AN Uz.SSR no.5:6-49 '59. (MIRA 14:5)
(Nura-Tau--Plants--Water requirements)

ZAPROMYOTOV, M. N.

"Concerning a Vitamin Which Strengthens the Walls of Blood Capillaries",
Priroda, No. 2, 1954, pp 103-106.

Trans.

M-201, 1. Mar 55

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1

ZAPROSOV, V.O., inzh.

Choice of rectifiers for the excitation networks of synchronous machines. Elektrotekhnika 35 no.5:6-19 My'64 (MIRA 17:8)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963810020-1"

KAZARYAN, L.Z.; ZAPROSYAN, T.O.

Synthesis of polyvinyl butyral by the exchange of the alcohol groups of polyvinyl acetate and dimethyl butyral. Izv. Akad. SSR
Khim. nauki 13 no.1:37-44 '60. (MIRA 13:7)

1. Yerevanskiy politekhnicheskiy institut im. K.Marksa, Kafedra
organicheskoy i fizicheskoy khimii.
(Vinyl compounds)
(Vinyl acetate)
(Butyraldehyde)

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E142/E465

AUTHORS: Kazaryan, L.Z. and Zaprosyan, T.O.

TITLE: Synthesis of Polyvinyl Butyral by Interchange of the Alcohol Groups of Polyvinyl Acetate and Dimethyl Butyrate

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Khimicheskiye nauki, 1960, Vol.13, No.1, pp.37-44

TEXT: In earlier work (patents and literature), the preparation of polyvinyl acetate by condensing polyvinyl alcohol with various carbonyl compounds, especially with aldehydes, was dealt with, (Ref.1). Alternative methods of preparation are also mentioned briefly (Ref.2 to 5). In this paper, the authors describe the direct synthesis of polyvinyl acetals by reacting polyvinyl acetate with dimethyl butyral in the presence of a catalyst (dimethyl sulphate); polyvinyl butyral and methyl acetate are formed. A 72.8 mole % conversion is obtained after 11 hours. (During the acetylation of polyvinyl alcohol by known methods only a 70 to 75 mole % conversion is achieved after 16 hours) (Table 1). A further advantage of this method consists in the

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E142/E465

Synthesis of Polyvinyl Butyral by Interchange of the Alcohol Groups of Polyvinyl Acetate and Dimethyl Butyrate

fact that the reaction can be carried out at very high temperatures (Table 3) as the acetals have much higher boiling points than corresponding aldehydes. It is also suggested that the process could be used for the synthesis of those esters where difficulties have hitherto been encountered during preparation. Fig.1 shows curves for the rate of acetylation obtained by plotting the content of butyral groups (in mole %) against time (in hours) in the presence of 1 g and 5 g dimethyl sulphate respectively, and in butanol. Tables 1 and 2 give analytical data on the content of butyral groups in test samples. The methyl acetate is determined by the quantity of alkali required for its saponification. The low yield of methyl acetate (36.3%) is due to the incomplete acetylation of the polyvinyl acetate and the partial saponification of the methyl acetate itself during the preceding neutralization of its water-methanol solution. There are 1 figure, 3 tables and 6 references; 3 Soviet and 3 non-Soviet.

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E142/E465

Synthesis of Polyvinyl Butyral by Interchange of the Alcohol Groups of Polyvinyl Acetate and Dimethyl Butyrate

ASSOCIATION: Yerevanskiy politekhnicheskiy institut im. K. Marksа
Kafedra organicheskoy i fizicheskoy khimii
(Yerevan Polytechnical Institute imeni K. Marx
Department of Organic and Physical Chemistry)

SUBMITTED: September 9, 1959

X

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KAZARYAN, L.Z.; ZAPROSYAN, T.O.

Saponification of polyvinyl acetate with dimethyl sulfate.
Zhur.prilkhim. 34 no.8:1898-1900 Ag '61. (MIRA 14:8)

1. Kafedra organicheskoy i fizicheskoy khimii Yerevanskogo politekhnicheskogo instituta imeni K.Marksa.
(Vinyl acetate)
(Vinyl alcohol polymers)

NAZIROV, N.N.; ZAPRUDER, Ye.G.; DZHANIKULOV, F.; MAVLYANKHODZHAEVA, S.;
KHAKMOVA, M.

Biochemistry of the wilt resistance of cotton. Uzb. khol.
zhur. no.5:45-56 '61. (MIRA 17:2)

1. Institut genetiki i fiziologii rasteniy AN UzSSR.

ZAPRUDIN, V.G.

Effectiveness of using a reducing gear on the "Druzhba" gas saw
for boring. Gosp. i kurt. no. 6:23-24 Je '63. (MIRA 16:9)
(Saws)

MIN'KO, V.Yu.; ZAPRUDIN, V.G.

Checking design loads in erecting triangulation signal towers.
Geod. i kart. no.8:30 Ag '63. (MIRA 16:9)
(Triangulation signal towers)

ZAPUDNAYA, A.I., nauchnyy sotrudnik

Cultivation practices for postharvest crops in the northwestern zone. Zhivotnovodstvo 21 no.6:68-69 Je '59.

(MIRA 12:8)

1. Severo-Zapadnyy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.
(Russia, Northwestern--Forage plants)

IOLIN, M.V., inzh.; ZAPRUDNEV, A.S., inzh.

Dismountable stand for making reinforced concrete span structures.
Transp.stroi. 10 no.6:13-15 Je '60. (MIRA 13:7)
(Reinforced concrete construction)
(Bridges, Concrete)

GUSHCHIN, I.Ye., inzh.; ZAPRUDNEV, Ye.M., inzh.

Launch made of plastic material. Sudostroenie 29 no.5:35-36
My '63. (MIRA 16:9)
(Fiberglass boats)

KHRENOV, Leonid Sergeyevich, prof.; Prinimal uchastiye ZAPRUDNOV,
B.D., inzh.; KAMENEV, N.P., dots., ofitsial'nyy retsenzent;
SHAROV, I.F., ofitsial'nyy retsenzent; BRUYEVICH, N.I.,
nauchnyy red.; LYAKHOVICH, Ye.A., red.; SHIBKOVA, R.Ye.,
tekhn. red.

[Geodesy] Geodeziia. Izd.2. Moskva, Goslesbumizdat, 1962.
476 p. (MIRA 16:6)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut (for
Kamenev). 2. Khrenovskiy lesnoy tekhnikum (for Sharov).
(Geodesy)

ZAPRUDNOV, B.D.

AUTHOR: None Given SGV/6-58-6-18/21

TITLE: Chronicle (Khronika)

PERIODICAL: Geodeziya i kartografiya, 1958, Nr 6, pp. 77-78 (USSR)

ABSTRACT: From April 23 - 28, 1958 a Conference of the Chief Engineers and Directors of the Technical Control of Aerial Surveying Enterprises took place at the Moscow Central Bureau of Surveying and Cartography of the Ministry of the Interior of the USSR (Glavnoye upravleniye geodezii i kartografii MVD SSSR). It dealt with the improvement of the production organization and the quality of topographical work in surveying of official importance. The following lectures were held: S. G. Sudakov, Deputy Director of the Glavnoye upravleniye geodezii i kartografii MVD SSSR on: "Main Problems in the Further Improvement of Topographical Work in Surveying of Official Importance". The Chief-Engineers of the enterprises held the following lectures: S. G. Gavrilov - "Technical Projecting of Topographical-Geodesic Field Work", S. I. Yurov - "Comprehensive Performance of the Position- and Elevation Orientation of Aerial Photographs", B. D. Zaprudnov - "Taking a Combined Photograph of Flat Country Covered With Forests", L. A.

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Chronicle

SOV/6-5B-6-18/21

Kashin - "Organization of the Financial Administration in Field Subdivisions of the Aerial Surveying Enterprise North-Caucasus"; M. V. Avilov, Director of the Stereo Works at the MAGP - "Control Operations on Stereotopographical Photographs at the MAGP". - The scientific members of the staff of the TsNIIGAiK held the following lectures:
B. A. Marin - "The Possibilities of Using the Light-Range-Finder in Compiling Geodesic Constructions". V. Ya. Mikhaylov - "On the Improvement of the Photographic Quality of Photographs". P. I. Durneva - "New Geodesic Instruments for the Preparation of the Basis for Topographic Photographs". M. S. Uspenskiy - "Some Results of the Stability Investigation of Traverse Stations and Monuments in the Area of the USSR". M. D. Konshin - "On Using the Elements of External Orientation in the Photogrammetric Evaluation of Aerial Photographs, and on the Increase of the Accuracy in Stereoscopic Measurements". G. D. Krasheninnikov - "On the Stereograph by Drobyshev". - The members of the staff of the departments of the GUGK held the following lectures:
G. S. D'yakov - "On the Stage of Technical Studies at Aerial Surveying Enterprises". V. N. Shishkin - "The Work of Rationalizing and Introducing the New Technique to the Topo-

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Chronicle

SOV/6-58-6-18/21

graphic-Geodesic Production of the GUGK in 1957". A. P. Shcheglov - "Analysis of the Measuring Accuracy in the Triangulation of 2nd and 3rd order in the Years 1956-1957". B. V. Troitskiy - "Marking Control Points for the Geodesic Preparation of Photographs". I. V. Krylov - "Analytical Method for the Determination of Position- and Altitude Traverse Stations".

Based on the lectures it could be found that during the last years the topographic photographs of the scale 1:25 000 and 1:10 000 have undergone great development.

The conference decided to invite the representatives of the aerial surveying enterprises of the departments of the State Geodesic Control as well as of the interested offices to a conference at the end of 1958 and to investigate the project for the plan of development of the geodesic tasks in 1959-1965.

1. Cartography
2. Aerial photography
3. Scientific reports

Card 3/3

ZAPRUDNOV, M.V., inzh.

Semitrailer with a capacity of 40 t. for transporting reinforced concrete columns. Energ.stroi. no.4:56-58 '59. (MIRA 13:8)

1. Leningradskiy filial instituta "Organenergostroy".
(Truck trailers)
(Columns, Concrete--Transportation)

ZAPRUDNOV, M.V., inzh.

Large-panel covering of the buildings of thermal and hydroelectric power plants. Energ. stroi. no.32:84-86 '62. (MIRA 16:5)

1. Leningradskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel stva.

8(6), 14(10)

SOV/112-59-4-6750

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 50 (USSR)

AUTHOR: Zaprudnov, M. V.

TITLE: New Method for Making a Dam-Beam Barrage for Closing an Overflow-Dam Crest

PERIODICAL: V sb.: Energ. str-vo, Nr 1, M.-L., 1958, pp 22-27

ABSTRACT: The Leningrad Branch Office of "Orgenergostroy" Institute developed a new method of closing an overflow-dam crest; the method has these distinctive features: (1) substituting reinforced blocks mounted in the repair slot for reinforced-concrete dam-beams; (2) underwater concrete placing in the reinforced blocks; (3) dry concrete placing of the overflow sill. The reinforced blocks consist of rigid metal frames and reinforced-concrete cover slabs mounted on the headwater side. The process of underwater concrete placing by means of a sinking pipe is described. Using the new method for closing the 10-bay-long crest at the Gor'kiy hydroelectric station resulted in a saving of about 1,000 tons of reinforcement steel.

A.I.I.

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